DOCUMENT RESUME

ED 181 101 UD 019 950

AUTHOR Miller, Norman: Maruyama, Geoffrey
TITLE Normative Influence in Desegregated Classrooms.
PUB DATE 79
NOTE 27p.: Paper presented at the American Psychological Association meetings (New York, NY, 1979)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement: *Change Agents: Changing Attitudes: Cooperation: Elementary Secondary Education: Friendship: *Minority Group Children: *Peer Acceptance: *Peer Influence: Race Relations: *School Integration: Student Improvement

ABSTRACT

The most accepted theoretical model for explaining how school desegregation produces academic benefits for minority children assumes that (a) school desegregation generates intergroup and interracial contact which (b) enables the achievement related values possessed by white children to be transmitted to minority students, which in turn (c) facilitates the academic achievement of these students through the internalization of achievement related norms as a result of peer acceptance or in anticipation of it. However, recent studies of this process, called normative social influence, have failed to support the above assumptions. Another possible influence on some academic gains in desegregated classrooms may be due to informational social influence, through which minority students may adopt behaviors that facilitate achievement without changes in personality. School desegregation as it is typically implemented does not create circumstances in which normative social influence can affect academic performance. Where minority students do exhibit gains, they are more likely the result of informational social influence and/or improved facilities. Cooperative learning techniques have also been shown to produce academic and attitudinal benefits in desegregated settings. (RIV)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

NOV 1 3 1979

ED181101

# Normative Influence in Desegregated Classrooms

Norman Miller

University of Southern California

and

Geoffrey Maruyama

University of Minnesota

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Norman Miller

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

UD019950

This paper was presented at the APA Meetings, 1979 in New York City.

# Normative Influence in Desegregated Classrooms

Norman Miller
University of Southern California

and

Geoffrey Maruyama
University of Minnesota

Since the historic Brown v. Topeka Board of Education decision in 1954, schools have been undergoing changes designed to facilitate both the academic achievement of minority children as well as cross-racial and cross-ethnic interpersonal acceptance. The most accepted theoretical model for explaining how school desegregation produces academic benefit to minority children assumes that (a) school desegregation generates inter-group and inter-racial contact which (b) enables the achievement-related values and motives possessed by high-achieving white children to be transmitted to minority and other low-achieving students, which in turn (c) facilitates the academic achievement of these latter groups of children. In this model internalization of achievement-related norms and values is either the result of peer acceptance or occurs in anticipation of receiving it. In short, this reasoning, which might be viewed as a "melting pot" approach, has presumed that desegregation would result in assimilation of minority children as they internalized values that facilitate achievement.

Though the preceding assumptions rely on a primarily unidirectional pattern of social influence flowing from high-achieving white children to all others, there were until recently several reasons to believe such influence patterns might in fact occur.

First, the circumstances in which school desegregation has been implemented often assures that the numerical majority of students be both white and high achieving. It has been assumed that this numerical preponderance would produce the desired social influence processes, for numerous laboratory experiments have shown majority norms, beliefs, values, etc., to exert much greater influence on minority norms, etc., than vice versa (e.g., Jones & Gerard, 1967). Second, the classroom reward structure is typically aligned to support the norms and behavior of high achieving children; implicit (and explicit) institutional sanctions, exemplified by standard grading practices, the receipt of the teacher's praise, etc., should legitimize and enhance the salience of achievement-related values. Third, cross-sectional correlational studies of the effects of school desegregation such as Crain & Weisman (1972) and U.S. Commission on Civil Rights (1967) have reported results which although silent about causal sequences, are nevertheless consistent with the notion that this theoretically predicted pattern of influence is indeed necessary for improvement of minority academic performance in desegregated classrooms.

In this paper, we will attempt to examine the plausibility of these assumptions about social influence processes in desegregated classrooms. Previously, they have been labeled "the lateral transmission of values hypothesis" or alternatively, "normative influence" or "social influence" processes. In this paper, following the language of Deutsch and Gerard (1955), such processes will be called <u>normative social influence</u>. First, we will briefly touch on the laboratory evidence supporting normative social influence; examine findings from research on school desegregation;

and then attempt to delineate some boundary conditions of normative social influence. Second, we will use the Deutsch and Gerard (1955) distinction between normative social influence and informational social influence to interpret the findings of past studies of school desegregation. Third, we will attempt to analyze the type classroom situations in which normative social influence is most likely to occur. Finally, we will examine the roles of informational and normative social influence in various cooperative learning procedures that have recently been used to increase academic achievement and promote interracial acceptance. In summary, then, this paper attempts to reconceptualize the social influence processes in desegregated classrooms and analytically examine their contribution to the goals of desegregation. In this sense then, it is an exercise in theoretical analysis; how does a particular social psychological construct apply to a specific educational setting, namely, the desegregated classroom?

## Normative Social Influence

According to Deutsch and Gerard (1955), normative social influence is "an influence to conform with the positive expectations of another (p.629)." Deutsch and Gerard refer to positive expectations as those experiences which, when fulfilled, lead to positive feelings and which, when not fulfilled, lead to the opposite.[1]

The occurrence of normative social influence has been well established by the now classic laboratory experiments of Sherif (1935) and Asch (1951) . More recently, Gerard (1954), for example, found normative social influence to flow predominantly from the majority to the minority. As one explanation of this directional

effect, Duval (1976) argues that the minority elicits a greater focus of attention which in turn results in preceptions of inaccuracy falling upon them. Whatever the explanation, demonstration of the powerful effects of social influence stands as one of the important theoretical contributions of experimental social psychology.

Additional research such as that of McClelland (1961) has established that certain sets of values seem to facilitate achievement. Others, such as Mussen (1953), have shown that such values are more prevalent among white children than among minority children. When taken in conjunction with the effects of normative social influence, it seems plausible that within the classroom the achievement-related values of white children might in fact be transmitted to other children.

As noted earlier, naturalistic studies of achievement and attainment of minority children, such as those by Crain & Weisman (1972), Schmuck (1968), the U.S. Commission on Civil Rights (1967) have produced findings consistent with the predictions derived from a consideration of normative social influence. The U.S. Commission on Civil Rights, for example, found academic achievement of Black children to be related to (a) having a close friend who is white, (b) a lack of racial tension, and (c) the percentage of white students in the classroom. These classroom ingredients can be interpreted respectively as reflecting (a) specific acceptance by whites, (b) general acceptance by whites, and (c) pervasiveness of achievement-related norms. As each increased, Black achievement also increased, implying that the former caused the latter. Adding further support to the normative social influence model,

Lewis and St. John (1974) conducted a path analysis study which used longitudinal data and thereby allowed more confidence in deriving causal relationships. They concluded that popularity "causes" classroom grades and argued that normative social influence accounted for the beneficial academic effect of acceptance by whites upon black achievement.

Though the evidence reported above may seem to provide sufficient support for the importance of normative social influence in creating benefits in desegregated classrooms, more recent research argues that it is largely irrelevant. Our own study of school desegregation in Riverside, California (Gerard and Miller, 1975), which was designed specifically to test the normative social influence model, fails to provide even minimal support. First, although the major thrust of the study was on the measurement of personal adjustment and the internalization of achievement-related values (attributes which are theoretically viewed as the mediators of normative influence effects), there was virtually no support for either improved adjustment or adoption of achievement-related values. Further, these mediating variables at best were very weakly related to achievement.

Further analysis of the Gerard and Miller (1975) data, using Jöreskog's (1973) causal-modelling techniques, which allow a "testing" of the plausibility of predicted patterns of causal relationships, have provided additional evidence consistent with our own earlier conclusions questioning the occurrence of cross-racial normative social influence in the desegregated classrooms of Riverside, California. First, in cross-sectional analyses examining the plausibility of normative social influence predic-

tions, Maruyama (Note 1) found little support for the view that personal adjustment variables influence achievement; such variables simply do not play the role predicted by the theory. Maruyama's (Note 1) findings, however, did suggest that acceptance by whites could influence achievement.

Because Maruyama's (Note 1) findings suggested a focus on peer acceptance, we undertook longitudinal analyses to probe further into the relation between achievement and peer acceptance (Maruyama & Miller, Note 2; McGarvey, Note 3). Contrary to the normative influence model of beneficial desegregation effects, these analyses found causal influence to flow from achievement to popularity rather than vice versa; further, they showed that academic achievement of both minority and white children remained unusually stable across time. Given this stability in academic performance, there is little if any reason to expect that normative social influence had occurred.

Given the inconsistency of the above findings with those of Lewis and St. John (1974), Maruyama and Miller (1979) employed Jöreskog's (1973) procedures to reanalyze the Lewis and St. John data. Contrary to Lewis and St. John's reported outcome, reanalysis with these superior procedures revealed that although achievement appeared to "cause" acceptance, acceptance did not "cause" achievement. Further, as was true in the previously cited studies, achievement was highly stable across time.

The inconsistencies between the predictions of normative social influence and the findings of studies attempting to examine that influence in classrooms suggest a comparison of classroom and laboratory settings in order to reconsider the conditions under

which normative social influence may or may not occur. There are many features of the laboratory situation that may act to enhance the strength of normative social influence. First, subjects typically have been highly co-oriented; they have been college students in a strange setting participating in a novel scientific experiment. Second, they typically have been strangers who could evaluate one another mainly in terms of their performance on the task at hand. Third, they generally have lacked any organized social structure based upon a prior history of social interaction.

Unlike the lab studies, heterogeneous classrooms contain features that impede or interfere with normative social influence processes. First, since acceptance of minority children by their peers more often occurs in the playground setting rather than in a scholastic setting (e.g. Gerard, Jackson & Conolley, 1975), contingencies between peer acceptance and scholastic achievement-related values may not be clear. Second, differing social histories and other factors may result in the formation of distinct social groupings and social support systems by different groups of students which are organized along social class and racial ethnic boundries. Clearly, the number of cross-racial friendship choices in most desegregated classrooms is distressingly small (e.g., Gerard, et al. 1975; Rosenberg and Simmons, 1972; Slavin,1979; Stephan,1978). Third, children moving into desegregated classrooms often have brought with them separate within-race social structures.

In effect, then, it appears that processes involving normative social influence are not typically major determinants of achievement changes in desegregated schools. Rather, prior social history

and friendship patterns prevail to keep levels of academic performance stable. This latter point seems not inconsistent with the original reasoning of Deutsch and Gerard (1955), who suggested that persons act as one of their own references for normative social influence. It may be that self-consistency and continuity are more important determinants of friendship patterns, etc., in desegregated classrooms.

If in fact processes involving normative social influence are not typically major determinants of achievement in desegregated schools, then there are two additional questions worth addressing. First, how can the studies showing positive academic effects of school desegregation be explained in conjunction with the fact that a far smaller proportion of studies show the attitudinal improvements that the normative influence model sees as mediating these academic improvements? And second, under what conditions are processes of normative social influence likely to occur in desegregated classrooms? In the next two sections of this paper, we will attempt to address these two questions.

School Desegregation and Increases in Achievement of Minority Children

Though we have argued that normative social influence processes do not typically occur in desegregated schools, some studies do show achievement gains for the minority children who attend them. We will for the moment ignore those studies that involve cooperative goal structuring; those studies will be considered in detail as we answer the question about situations in which normative social influence is likely to occur. The remaining studies are not linked by specific desegregation techniques or circumstances;

rather, they are difficult to characterize as distinct in any consistent way from those in which achievement was unchanged or decreased.

In attempting to determine what produced increased achievement in these cases, we will examine first how aspects of the classroom might differ. For example, in reanalysis of the data of Lewis and St. John (1974) (Maruyama and Miller, 1979), we found that the percentage of white classmates during grades 1-5 was related to minority students' achievement during grades 1-5 but not to either their later achievement or to their subsequent acceptance by peers. This finding suggests that there may be differences in some features of the classrooms these children attended. If teachers gear their curriculum and teaching level to the average performance level of their students and if white students typically display higher achievement than do minority students, then classes with greater percentages of whites will be taught at a "higher" or more demanding level. Further, it has not been established that the facilities in the classrooms of different schools do not differ; although Coleman et al, (Coleman, Campbell, Hobson, McPartland, Mood, Weinfield, and York, 1966) argued that facilities were only weakly related to achievement, Ryan (1971) pointed out that by imposing controls for social class before examining the relation between facilities and achievement,the results of the comparision become questionable at best. If one includes teachers as a "facility", then there may be additional differences between white and minority schools beyond those discussed by Coleman, et al (1966) and Ryan (1971). The concentration of younger, less experienced teachers in central city schools is

characteristic of most large urban school districts; Heim (1972) has shown that amount of teacher training and expertise is one of the few educational input variables which affects academic performance. To summarize, this line of reasoning suggests that when minority students do show scholastic achievement gains following the implementation of school desegregation programs, they are due to improvement in the quality of facilities, the quality of instruction, and/or the level of academic content to which they are exposed.

It is also possible, however, that the correct explanation for improvements in achievement, when such improvements are found, does not rest primarily upon changes in facilities and instruction, but instead, upon other aspects of interaction between children. Deutsch and Gerard (1955) provide a framework for such an explanation; as a complement to normative social influence, they define informational social influence. Informational social influence is "an influence to accept information obtained from another as evidence about reality (p. 629)." In desegregated classrooms, minority children may adopt behaviors that facilitate achievement without either changing in general ways, such as in terms of their personality or adjustment, or in terms of their acceptability as a friend by their classmates. Instead, by exposing minority children to other children whose values and attitudes not only differ from their own but, additionally, facilitate academic achievement, school desegregation may provide them with the opportunity to learn about the usefulness of specific behaviors instrumental for improved academic performance. To repeat, one consequence of school desegregation may be to directly expose minority and

lower class children to more "adaptive" patterns of scholastic behavior.

Whereas normative influence directs the observer toward the goal to be achieved, informational influence instructs him in the ways of getting there. From this perspective, the functional feature of the desegregated classroom is not its ability to create a setting for the minority child in which new goals and means for attaining these goals prevail among his peers, but rather, one in which the behaviors necessary for obtaining them are routinely preponderent. If I received phone calls from people all over Los Angeles urging me to go to Heaven, I am not sure what new action I would take; an observer may find me no closer tomorrow than yesterday. If, however, I were to see thousands of people fleeing north up the coast highway, I might join in without even knowing exactly where I or they were going. Of course, in most real life circumstances, these two types of information are coordinated; one receives instruction regarding which goals are good as well as how to achieve them. But perhaps acceptance of the goal depends more heavily on information about how to achieve it than previously realized.

The preceding discussion does not deny that models for effective academic behavior exist in segregated as well as desegregated classes. There is an important distinction, however, between the classroom with a few instances of such behaviors, as provided by two or three children, and one in which a preponderance of children exhibit them. Only in the latter instance would the beneficial information regarding effective academic work habits constitute normative behavior and therefore provide a strong impetus to conform to it. The pressure to accept normative or

informational influence depends upon the extent to which a preponderance of actors in any given setting concur about both the goal and the method of achieving it. That the actors belong to one's own ingroup however, may be more important for the case of normative influence than for that of informational influence. To the extent that minority and lower class children are able to determine which behaviors are adaptive and learn through observing others how to display those behaviors, their own academic achievement may increase. There are almost certainly long-term benefits from this type of re-socialization, for behaviors that are adaptive for classroom settings will clearly be useful in work and other settings as well.

Fishbein and Ajzen (1976) provide a second perspective for viewing the distinction between normative and informational social influences in their model of attitude change. They see behaviors as resulting from behavioral intentions, which in turn are molded by two distinct sources: attitude toward the behavior and the subjective norm about the behavior. The attitude is drawn from beliefs about consequences of the behaviors, the subjective norm from normative beliefs. From the present perspective, desegregation may allow children to form new beliefs about the appropriateness or the consequences of certain behaviors (which may in turn lead them to develop new attitudes and values). It is this acquisition of those new beliefs about appropriate behaviors that we are calling informational social influence. On the other hand, as indicated, desegregation can in principle also provide a new set of normative beliefs. If conforming to these normative beliefs is important, then the subjective norm is salient, and behaviors

will follow from the subjective norms. This latter view represents normative social influence. In accord with Deutsch and Gerard's earlier distinction, the Fishbein and Ajzen model views normative and informational influence processes as parallel but distinct. Whereas changes in the minority child's subjective norms rests upon mutual cross-racial acceptance, informational influence does not. From our own perpsective, it is beliefs about appropriate and inappropriate behaviors and their consequences that are most easily changed in desegregated schools.

Although we have argued that informational social influence may have been responsible for some of those achievement gains found in desegregated schools, it is clear from academic outcomes that in and of itself informational social influence is not a powerful determinant of behavior in desegregated schools; the results of the studies of achievement in desegregated classrooms have been mixed (e.g., Stephan, 1978). Further, as we argue above, since informational social influence in desegregated classrooms typically occurs in the absence of any normative social influence, one major purpose of school desegregation, namely, promoting intergroup acceptance, has not been achieved. In the next section of this paper, we will attempt to define the necessary ingredients for promoting intergroup acceptance and discuss one general method for producing such contact.

Producing Normative Social Influence

In our preceding discussion, intergroup acceptance played a pivotal role in determining whether or not normative influence might occur. Allport (1954) and others (e.g. Cook, 1970) provide

an alternative perspective for viewing intergroup acceptance, one in which it is the desired end state or goal, rather than a variable which mediates other effects. This latter view stresses the importance of equal status contact between different students. It argues that students should not only receive equal access to facilities; they should also bring with them into the classroom comparable resources and prestige. Further, in the classroom they should be pursuing common goals and they should not be put into situations involving face-to-face competition, but rather, should be cooperating with one another.

It is the concept of cooperation that we will address here. This concept, which presumes the pursuit of common goals and the value of interdependence, can under some circumstances run counter to the assimilation or "melting pot" view described earlier. That is, from the assimilation view, a part of the expectation for improved minority student achievement in desegregated classrooms is that minority students will respond to the higher academic standards of these classrooms. One basis for this responsiveness is the belief that competition is beneficial and will lead to improved performance (e.g., Gerard, 1975). Thus, in the assimilation approach, the burden of change rests entirely upon the minority child. On the other hand, when racially mixed groups of children cooperatively work together, a teacher can structure the learning task so that the unique values, interests, and abilities of minority children can contribute to successful task completion as importantly as do those of white children.

Deutsch (1949, 1979) described the goal interdependence of

cooperation as a feature which produces positive cathexis; in other words, it promotes interpersonal attraction. Contrarily, Deutsch described competition as resulting in decreased attraction, or negative cathexis. According to the Deutsch model, competition should routinely isolate children from one another as they compete for scarce rewards. The negative cathexis generated by competition should greatly decrease the likelihood of attraction and friendship. Cooperation, on the other hand, should promote contacts among interacting students. Provided that groups are heterogeneous, the within-group contacts should lead to increased cross-racial and cross-ethnic liking and acceptance (see also Johnson & Johnson, 1979).

From Deutsch's (1949) perspective, cooperative learning techniques should produce both normative and informational social influence. Simply interacting cooperatively enhances informational social influence, for children are able to see first-hand the behaviors of others. Insofar as the interactions within cooperative groups should be positive, attraction to others (friendliness) should result from cooperation. This attraction should increase concern about normative values and produce a group orientation or identification. Deutsch (1949) further argues that attitudes within a group will become more similar as students identify with or aspire to become part of the group (see also Kelley, 1952; Newcomb, 1943). It is these processes of attraction, group orientation and identification, and attitude similarity that reflect normative social influence. Further, there is an additional positive benefit of cooperation; self-attitudes of children in cooperative groups should improve (e.g. Johnson & Johnson, 1979).

Applications of cooperative techniques have proven to be the most successful method for producing increased intergroup acceptance as well as improved academic achievement in desegregated classrooms (e.g., Aronson, Blaney, Sikes, Stephan, and Snapp, 1975; 1978; DeVries, Edwards, and Slavin, 1978; Johnson, Johnson, and Scott, 1978; Slavin, 1978; 1979; Weigel, Wiser, and Cook, 1975). In the next section of this paper, we will examine how those techniques engage normative and informational social influence processes to improve performance and increase intergroup contact.

Informational and Normative Social Influence and Cooperative Learning Techniques

As stated earlier, cooperative learning techniques should produce both informational and normative social influence. Various cooperative techniques, however, seem likely to produce such influence in different ways. We will specifically focus upon three types of techniques: first, the method of JIGSAW, developed by Aronson and his colleagues, which "gives each child in the group part of the solution" (e.g. Aronson, et al. 1975, 1978); second, that of TGT (Team Games Tournaments) and STAD (Student Teams Achievement Divisions), as developed by DeVries and Edwards and by Slavin, which set up heterogeneous teams for within-group cooperation and between group competition (e.g., DeVries, et al. 1978; Slavin, 1978); and third, the approach of the Johnsons, which, drawn directly from Deutsch (1949), involves pure cases of cooperation, competition, and individualization (e.g., Johnson, Johnson, and Scott, 1978).

As it is typically used, JIGSAW requires teachers to subdivide instructional materials so that each child in a group has only part of the total unit to be mastered. After being given specific bits of instructional material, children are allowed to interact with others from different groups who have the same material in order to refine their understanding of it and/or prepare their presentation of it to their teammates. Then students return to their groups to explain their own segment of the total unit to one another, and finally, students are tested individually. Because outcomes are not interdependent, much of the positive cathexis and group identification may be minimized, with the consequence that normative social influence is minimal. In JIGSAW, normative social influence seems most likely to occur between children as they help one another to prepare their presentation. In other words, it occurs across groups rather than within them.

Of the techniques that combine cooperative (within groups) and individual competitive (between groups) techniques, we will focus on two: Teams-Games-Tournaments--TGT (DeVries, et al. 1978) and Student-Teams-Achievement-Divisions-STAD (Slavin, 1978; 1979). In these techniques students either compete only against children of comparable skill levels or are "handicapped" in a fashion similar to those used for sports events (e.g. golf); children's scores are adjusted based upon their past performance. The within-group cooperation seems likely to increase normative social influence; however, since students are tested individually, there may be less positive cathexis than occurs in groups of children who are allowed to work together to produce a common product upon which they are evaluated. Yet, because individual outcomes do contribute to team scores, there should be some positive cathexis.

In effect, then, these techniques probably produce more normative social influence than does the JIGSAW method but less than Deutsch (1949) might predict from a pure cooperative procedures such as those described next.

The third group of cooperative techniques (e.g. Johnson, et al. 1978; Weigel, et al. 1975) use procedures derived directly from the theoretical perspectives of Deutsch (1949). In their use of cooperation they not only employ group interaction but also group rather than individual outcomes. These techniques seem to be closest to Allport's (1954) specification of the ideal conditions for interracial contact, and consequently ought to produce the gratest amounts of normative social influence.

To restate our conclusions about the amount of normative and informational social influence produced in various cooperative techniques, we have argued that (1) cooperation of any type facilitates informational social influence and that (2) the greater the emphasis upon group processes (e.g. sharing, helping) and goal interdependence in a particular cooperative learning procedure, the greater the amount of normative social influence.

Summary

Let me now summarize our current position. We have argued that the normative influence model, which continues to be widely accepted as the vehicle by which desegregation improves the academic performance of minority children is wrong. School desegregation as it is typically implemented does not create circumstances in which normative social influence can affect academic performance.

Why? Because it fails to create the cross-race social acceptance that is the prerequisite for it. Instead, where minority students do exhibit academic gains, they are more likely the result of informational social influence and/or improved facilities and a more demanding curriculum. On the other hand, cooperative learning techniques, which have been shown to produce academic and attitudinal benefits in desegregated settings, do contain the structural ingredients necessary for both normative as well as informational influence upon academic behavior to occur.

Having said this, however, it is important to keep it in proper perspective. Although we have focused on normative and informational influence, it should not be concluded that the effectiveness of cooperative learning procedures lies primarily in their ability to engage these influence processes. Rather, we suspect that their major benefit stems from more direct modification of the social interaction patterns between children and the motivational surge that comes from their restructuring of the classroom learning process. These benefits do not primarily rest upon either normative or informational influence but instead follow directly from the restructuring of basic classroom learning procedures. At the same time, however, as argued above, they also create a setting in which beneficial normative and informational influence can also occur. When it does, it will further aid in attaining the goals of desegregation.

## FOOTNOTES

1. It is also important to note that, by their definition, "self" can function as "another". That is, normative social influence can occur when persons conform to their own expectations as well as the expectations of others.

## REFERENCE NOTES


1. Maruyama, G. A causal-model analysis of variables related to primary school achievement. Unpublished doctoral dissertation, University of Southern California, 1977.

2. Maruyama, G. & Miller, N. Does popularity cause achievement?: A longitudinal test of the lateral transmission of values hypothesis. Manuscript in preparation.

3. McGarvey, W.E. Longitudinal factors in school desegregation. Unpublished doctoral dissertation, University of Southern California, 1977.

## REFERENCES


Allport, G.W. The nature of prejudice. New York:Addison-Wesley, 1954.

Aronson, E., Blaney, N., Sikes, J., Stephan, C., & Snapp, M. Busing and racial tension: The jigsaw route to learning and liking. Psychology Today, 1975, 8, 43-59.

Aronson, E., Blaney, N., Stephan, C., Sikes, J. & Snapp, M. The jigsaw classroom. Beverly Hills, CA : Sage, 1978.

Asch, S.E. Social psychology. Englewood Cliffs, N.J.: Prentice-Hall, 1952.

Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfield, F.D., & York, R.L. Equality of educational opportunity. Washington, D.C.: Office of Education, Department of Health, Education, & Welfare, 1966.

Cook, S.W. Motives in a coneptual analysis of attitude-related behavior. In W.J. Arnold and D. Levine (Eds.), Nebraska Symposium on Motivation. Lincoln: University of Nebraska Press, 1970.

Crain, R.L. & Weisman, C.S. Discrimination, personality, and achievement: A study of Northern Blacks. New York: Seminar Press, 1972.

Deutsch, M. The effects of cooperation and competition upon group process. Human Relations, 1949, 2, 199-231.

Deutsch, M. Education and distributive justice: Some reflections on grading systems. American Psychologist, 1979, 34, 391-401.

Deutsch, M., and Gerard, H.B. A study of normative and informational social influence upon individual judgment. Journal of Abnormal and Social Psychology, 1955, 51, 629-636.

DeVries,D.L., Edwards, K.J., & Slavin, R.E. Biracial learning teams and race relations in the classroom: Four field experiments in Teams-Games-Tournament. Journal of Educational Psychology, 1978, 70, 356-362.

Duval, S. Conformity on a visual task as a function of personal novelty on attitudinal dimensions and being reminded of the object status of self. Journal of Experimental Social Psychology, 1976, 12, 87-98.

Fishbein, M., & Ajzen, I. Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, Mass.: Addison Wesley, 1975.

Gerard, H.B. The effects of different dimensions of disagreement upon the communication process in small groups. Human Relations, 1954, 6, 249, 271.

Gerard, H.B. The study. In H.B. Gerard & N. Miller, School desegregation. New York:Plenum, 1975.

Gerard, H.B., Jackson, T.D., & Conolley, E.S. Social contact in the desegregated classroom. In Gerard, H.B., & Miller, N. School desegregation. New York:Plenum, 1975.

Gerard, H.B. & Miller, N. School desegregation. New York: Plenum, 1975.

Heim, J.J., What research says about improving student performance. Albany, New York: The University of the State of New York The State Education Department, Bureau of School Programs Evaluation, June, 1972.

Johnson, D.W., and Johnson, R., Learning together and alone - cooperation, competition, and individualization. Englewood Cliffs, N.J.: Prentice-Hall, 1975.

Jones, E.E., & Gerard, H.B. Foundations of social psychology. New York: John Wiley & Sons, 1967.

Jöreskog, K.G. A general method for estimating a linear structural equation system. In A.S. Goldberger & O.D. Duncan (Eds.), Structural equation models in the social sciences. New York: Seminar Press, 1973.

Kelley, H.H. The two functions of reference groups. In G.E. Swanson, T.M. Newcomb, & E.L. Hartley (Eds.), Readings in social psychology. 2nd edition, New York: Holt, 1952.

Lewis, R., & St. John, N. Contribution of cross-race friendship to minority group achievement in desegregated classrooms. Sociometry, 1974, 37, 79-91.

Maruyama, G., & Miller, N. Re-examination of normative influence processes in desegregated classrooms. American Educational Research Journal, 1979, 16, in press.

McClelland, D.C. The achieving society. Princeton: D. Van Nostrand, 1961.

Mussen, P.H. Differences between the TAT responses of Negro and white boys. Journal of Consulting Psychology, 1953, 17, 373-376.

Newcomb, T.M. Personality and social change. New York: Dryden, 1943.

Rosenberg, M. & Simmons, R.G. Black and white self-esteem: The urban school child, Washington, D.C.: American Sociological Association, 1971.

Ryan, W. Blaming the victim. New York: Pantheon, 1971.

Schmuck, R.A. Helping teachers improve classroom group processes. Journal of Applied Behavioral Science, 1968, 4, 401-435.

Sherif, M. A study of some social factors in perception. Archives of Psychology, 1935, 27, No. 187, 1-60.

Slavin, R.E. Student teams and comparison among equals: Effects on academic performance and student attitudes. Journal of Educational Psychology, 1978, 70, 532-538.

Slavin, R.E. Effects of biracial learning teams on cross-racial friendships. Journal of Educational Psychology, 1979, 71, 381-387.

Stephan, W.G. School desegregation: An evaluation of predictions made in Brown vs. Board of Education. Psychological Bulletin, 1978, 85, 217-238.

U.S. Commission on Civil Rights. Racial isolation in the public schools. Washington, D.C.: U.S. Government Printing Office, 1967.

Weigel, R.H., Wiser, P.L., and Cook, S.W. The impact of cooperative learning experiences on cross-ethnic relations and attitudes. Journal of Social Issues. 1975, 31, 219-244.